

Abstract of the Disclosure

5 An obstacle detecting pig for preliminary inspection of a section of a pipeline travels through the section and determines if there are any restrictions that exceed industry guidelines or that might damage other pigs that require the full bore of the pipe. In a first embodiment, a disk-shaped segmented resilient member (14) is mounted in the body of the pig. Its outside diameter is smaller by a spacing (21) than the inside diameter of the pipeline (15). The spacing is set at the maximum tolerable size of the obstacle encountered. The deformation of the member (14) is transmitted by a linkage (22) to a slider (16) activating a switch system signaling that an obstacle has been encountered. A non-resiliently deformable checkup disk (19) may be provided at the rear end of the pig, to double check that a no-signal passage through the pipe is not due to failure of the switching system. In a particularly preferred embodiment, the resilient member is a disc-shaped detector (46) made from an elastomer and provided at its leading surface with a scratch recording layer (51), for instance a layer of lead which is thin enough to follow resilient deformations of the elastomeric ring (50) as it encounters an obstacle, and return of the ring back to its regular, shape. The scratches caused on the recording layer are evaluated after the passage of the pig through the examined pipeline section. The detector is mounted directly on a slider (44) or the like operating device designed to produce electric signal when an anomaly is encountered. Preferably, the detector (46) is a replaceable element of the pig.

The device is structurally simple thus providing low manufacturing and operation costs and simple operation.

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